



Watershed Protection Management for Zara Maieen Mujib (ZMM) Project



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Introduction

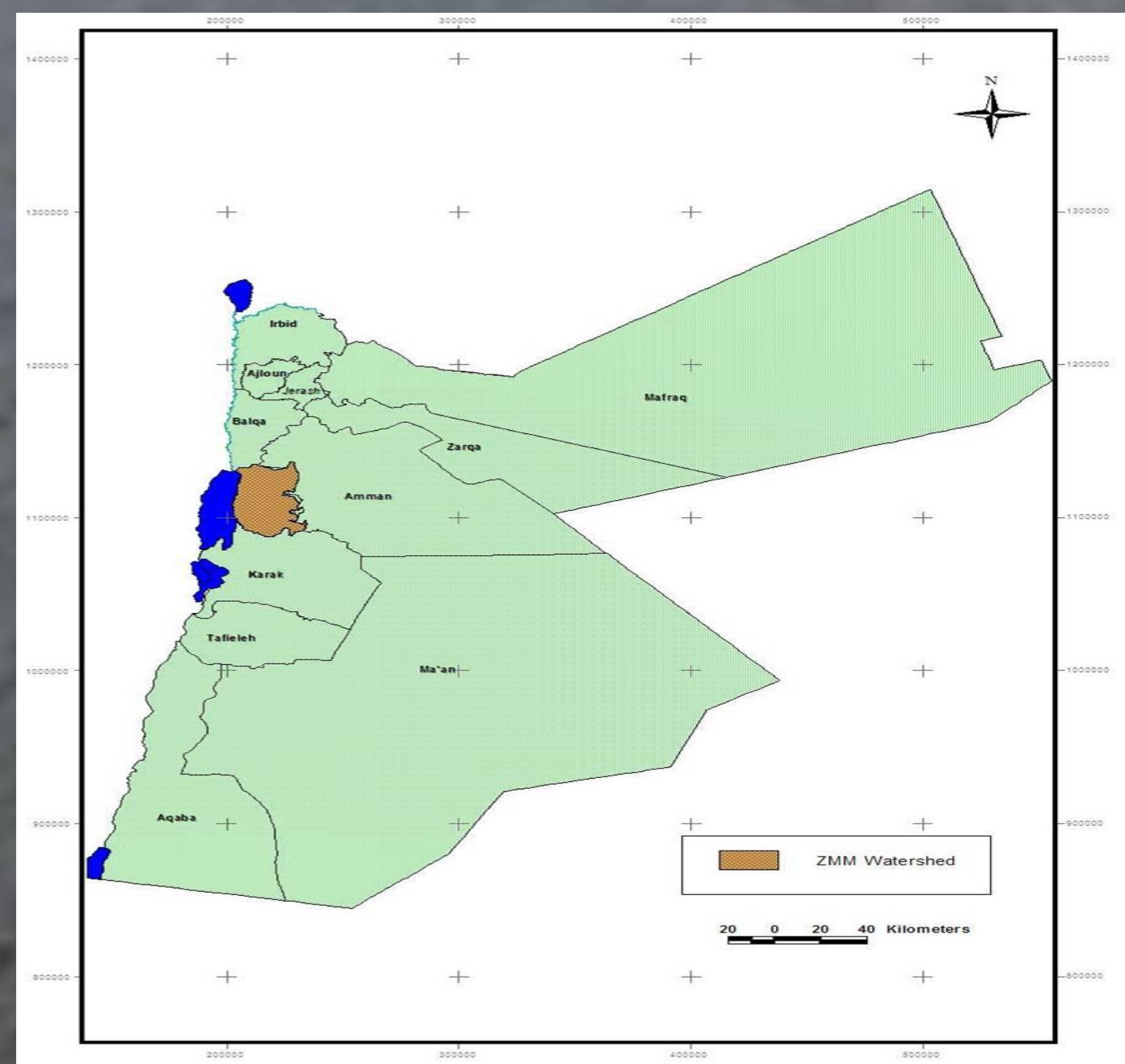
Surface water resources are increasingly important for domestic water supply in Jordan. In order to protect the water resources in Zara- Maieen- Mujib project watershed, WAJ with cooperation with USAID -CDM Co. implement a project concerning surface and ground water resources protections in this watershed.

Zara – Ma`een – Mujib (ZMM) Watershed is located in the central part of Jordan, including the majority of Madaba Governorate, and limited Southern parts of Amman Governorate. In ZMM Watershed, the base flow and the flood flows are used to supply the Zara Maieen Water treatment plant with raw water that is treated and then pumped to the Capital Amman. This supply is done through The Mujib dam and the walla dam. Other sources that includes the Wadi Zarqa Maieen springs, the hot springs and the Wadi Abu Khusheibah.

Water Resources Protection Plan for Zara- Maieen- Mujib Project Watershed is a technical definition used to explain the restrictions (Prohibitions, limitations and measures) on Urban, Industrial, Touristic and Agricultural development. For each protection zone special restrictions are developed and defined, and presents the concept of water resources protection zones and the implemented methodology for delineating the water protection zones for the Zara – Maieen – Mujib Watershed.

The objectives of the Project :

- Developing Water Resources Protection Zones for the Zara – Maieen – Mujib Watersheds: Water protection Zone-1,2 and 3 for the dams, wadis and springs.
- water protections Zone1,2 and 3 for the major wadis in the watershed.
- Land use Practices and Its Possible Pollution Impacts Within the Zara – Ma`een – Mujib Watershed
- Providing technical support to the WAJ in developing Watershed Management Plans for Mujib Zara- Ma`een- Watersheds;

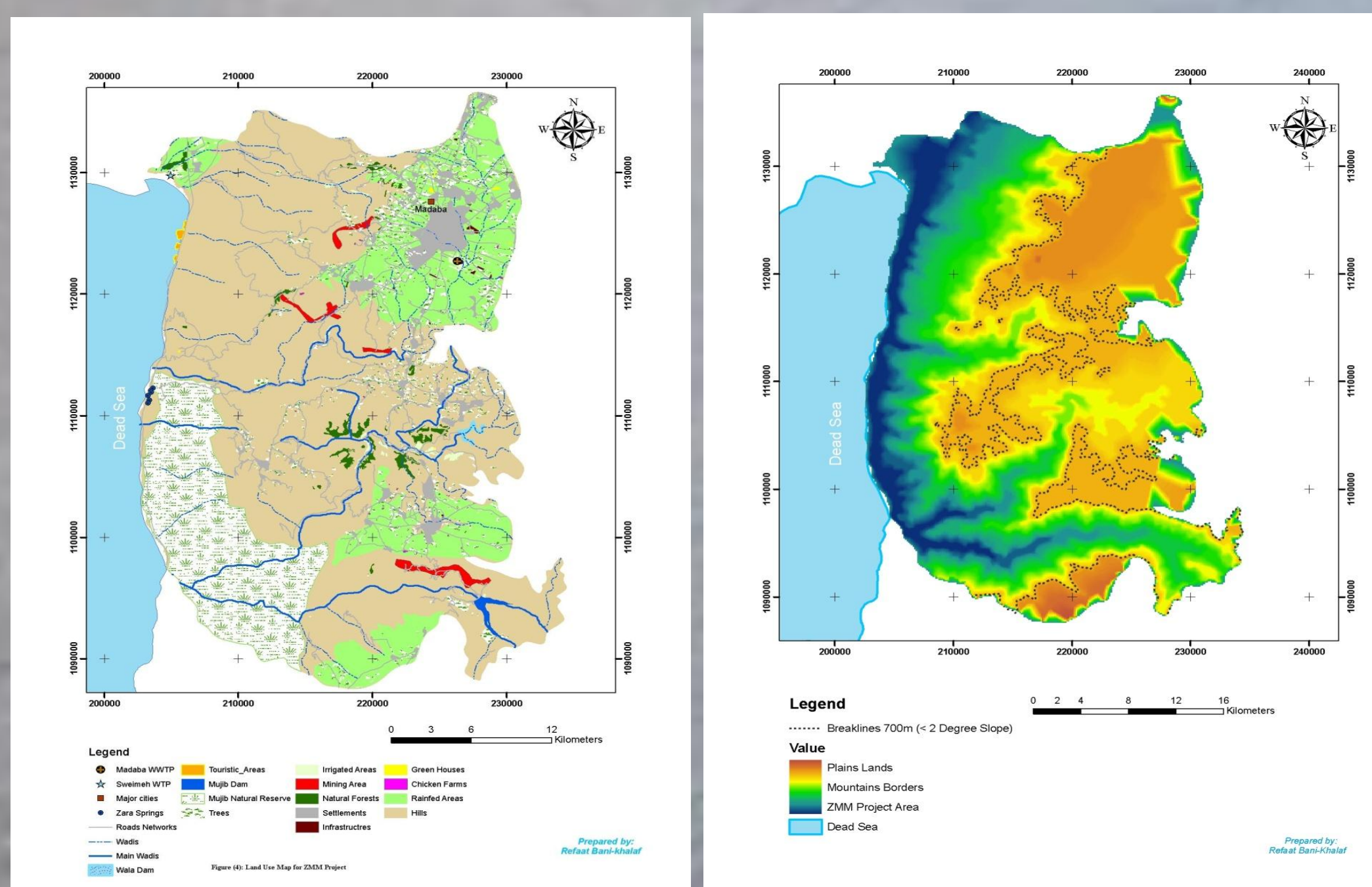


Water Sources in ZMM Watershed:

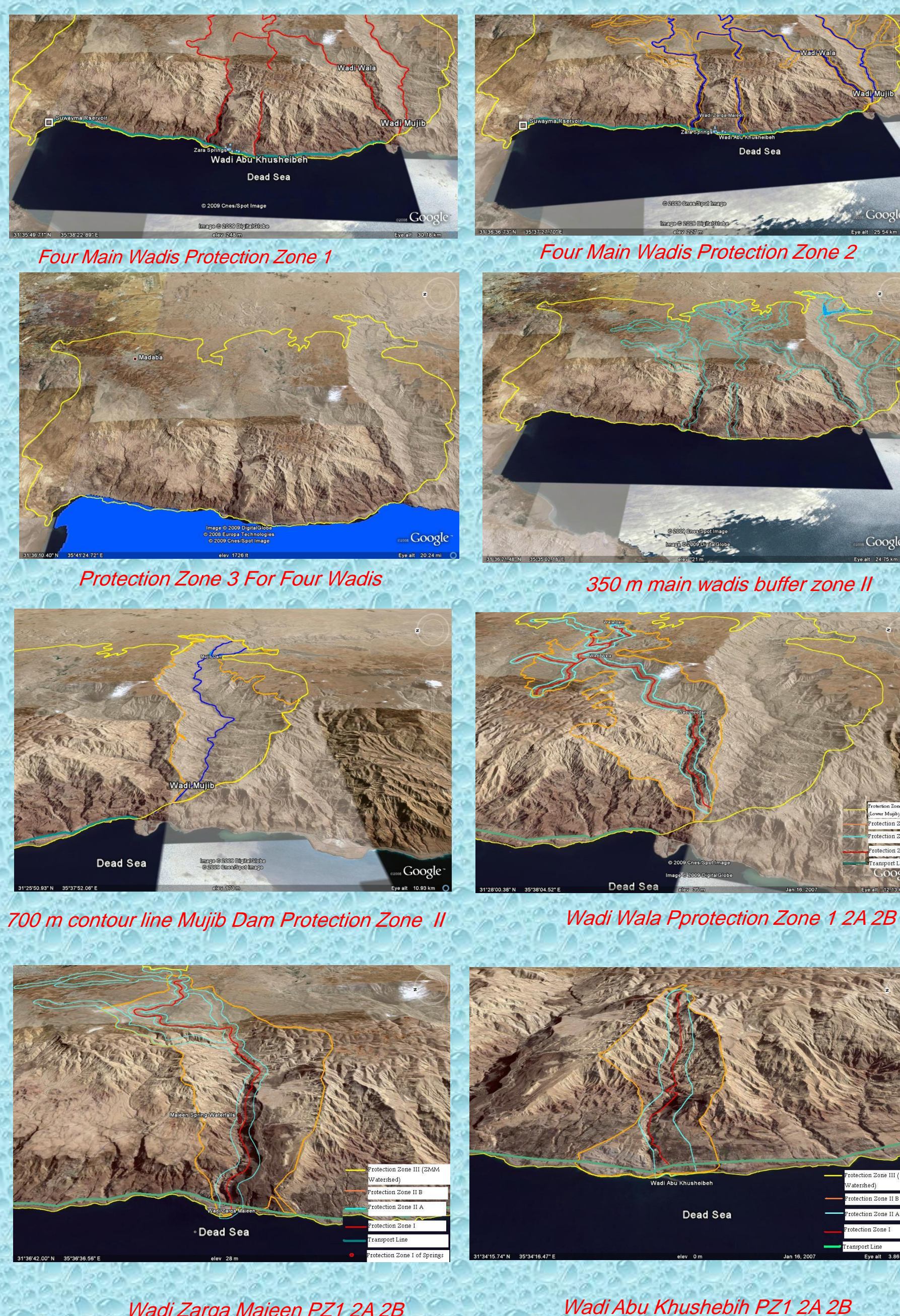
- The Mujib and Walla dams: the Sweimeh water treatment plant was supplied from this source by 22.2 MCM/y and 25.3 MCM/.
- Wadi Zarqa Maieen springs, the hot springs and the Wadi Abu Khusheibh with 17.4 MCM/yr

Methods

- (1) Prepare Land use Practices and Its Possible Pollution Impacts Within the Zara – Maieen – Mujib Watershed ,also Prepare Digital Elevation Model for Contour lines or Heights within ZMM Watershed



(2) Delineation for protection Zones (Zone 1,2,3) for Wadis, Dams, Transfer Pipelines or Streams.



Major Pollutions Sources

- Gypsum Mining : its locates along Wadi Mujib.



- **Services Usage** : includes general stores, supermarkets, gas stations, vehicles maintenance stations and olive pressing stations.



- **Agricultural Activities:**

Indicated the wide usage of chemical fertilizers and pesticides, especially by the vegetable farmers. Furthermore, some of the Chicken farms owners stated that they find difficulty with managing the resulted solid wastes from their farms.



- **Touristic Usage:-**

This type of usage is concentrated in the northwestern parts of the watershed within the northern parts of the Dead Sea shore. Under this category of land use, the following can be listed:



- **Residential Usage:**

Major cities: this sub-category is represented by Madaba city which is located in the northeastern parts of the watershed.
Towns: such as Theban town which is considered the major town in Madaba Governorate.

Recommendations

- 1.Implementing the ZMM Watershed Water Protection Zoning
- 2.Protecting the Wadi Mujib and Restrict all mining activities
- 3.Implement an Agricultural Technical Support Program
- 4.Conduct a site investigation for The Fuel Stations